



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/635,740 | 08/05/2003 | Hea-Suk Jung | 51876P367 | 8831 |

8791 7590 04/04/2005

BLAKELY SOKOLOFF TAYLOR & ZAFMAN
12400 WILSHIRE BOULEVARD
SEVENTH FLOOR
LOS ANGELES, CA 90025-1030

| |
|----------|
| EXAMINER |
|----------|

LE, THONG QUOC

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

2827

DATE MAILED: 04/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/635,740

Applicant(s)

JUNG, HEA-SUK

Examiner

Thong Q. Le

Art Unit

2827

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 8-14 is/are rejected.
- 7) ☒ Claim(s) 3-7 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

1. Amendment filed on February 01, 2005 has been entered.
2. Claims 1-7 have been amended.
3. Claims 8-14 have been added.
4. Claims 1-14 are presented for examination.

Information Disclosure Statement

5. This office acknowledges receipt of the following items from the Applicant:
Information Disclosure Statement (IDS) filed on 02/01/2005.
6. Information disclosed and list on PTO 1449 was considered.

Response to Arguments

7. Applicant's arguments with respect to claims 1-7 have been considered but are moot in view of the new ground(s) of rejection.

Double Patenting

8. Claims 8-14 are objected to under 37 CFR 1.75 as being a substantial duplicate of claims 1-7. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Regarding set of claims 1-7 and set of claims 8-14, the contents in set of claims 8-14 are the same contents in set of claims 1-7.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

10. Claims 1-2, 8-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Kwon et al. (U.S. Patent No. 6,768,690).

Regarding claims 1,8, Kwon et al. discloses a delay locked loop (DLL) block to generate a delay locked clock signal by delaying an external clock signal in a semiconductor device (Figure 4), comprising:

a clock buffer (41, 42) to receive the external clock signal (clk) and an inverted signal (/clk) of the external clock signal to generate a plurality of internal clock signals (fall_clk, rise_clk);

a clock divider (43, 55,56) to receive one of the internal clock signals (rise_clk) and a control signal (dll_en) based on a column address strobe (CAS) signal to generate a divided signal having a predetermined pulse (Figure 7, act_rasz) width adjusted by the control signal (Column 6, lines 21-29, Column 6, lines 5-29, 64-67, Column 7, lines 65-67, Column 8, lines 1-57); and

a DLL circuit (Figure 4, 40) to receive the plurality of internal clock signals (Column 1, lines 42-47) and the divided signal to generate the delay locked clock signal (Figure 4, ifclk, irclk).

Regarding claim 2,9, Kwon et al. disclose wherein the DLL circuit includes: a plurality of delay lines (Figure 4, 44,45, 46), each delay line having a plurality of unit delays, to delay the plurality of internal clock signals and the divided signal (Figure 4);

a delay model (Figure 4,52) to delay an output of the plurality of delay lines for a predetermined delay time to generate a feedback signal;

a phase comparator (Figure 4, 49) to compare a phase of a reference clock signal generated by the clock divider with a phase of the feedback signal in to generate a comparison signal, wherein the reference clock signal is an inverted version of the divided signal;

a shift controller (Figure 4, 48) to generate a shift right signal or a shift left signal according to the comparison signal; and

a shift register (Figure 4, 47) to adjust delay amount of the delay lines in response to the shift right signal or the shift left signal.

Allowable Subject Matter

11. Claims 3-7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 3-7 include allowable subject matter since the prior art made of record and considered pertinent to the applicant's disclosure does not teach or suggest the claimed limitations. Kwon et al. (U.S. Patent No. 6,768,690), and others, does not teach the claimed invention having a clock divider includes a first divider to receive the one of the internal clock signals to generate a first divided signal having a first pulse width and a first period; a second divider to receive the first divided signal in order to generate a second divided signal having the first pulse width and a second period and a third divided signal having a second pulse width and the second period; a selector to selectively output the second divided signal and the third divided signal according to the control signal; a third clock divider to receive an output of the selector to generate the divided signal.

Conclusion

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thong Q. Le whose telephone number is 571-272-1783. The examiner can normally be reached on 8:00am-5:00pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoai V. Ho can be reached on 571-272-1777. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Thong Q. Le
Primary Examiner
Art Unit 2827

**THONG LE,
PRIMARY EXAMINER**